

Notice of Allowability

Application No.

10/627,335

Examiner

Eunhee Kim

Applicant(s)

JORGENSEN ET AL.

Art Unit

2123

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 08/16/2007.
2. ☒ The allowed claim(s) is/are 1-12 and 16-20.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____ |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____ |

DETAILED ACTION

1. The amendment filed 08/16/2007 has been received and considered.

Claims 1-12 and 16-20 are presented for examination.

EXAMINER'S AMENDMENT

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Michael R. Hardaway (Registration # 52992 at Patterson & Sheridan, LLP) on 22nd October 2007 at 4:10 pm.

3. The application has been amended as follow:

Claim 1 line 2 the word "target" has been replaced with the phrase --hardware target--.

Claim 13-15 has been canceled.

Claim 11 has been replaced with the following:

- 11. A method of processing signals wit a modified netlist within a software-based logic simulation tool comprising the step of:
- creating a netlist of objects specifying each object for a target hardware architecture, wherein the target hardware architecture is a field programmable gate array;
 - identifying objects specific to the target hardware architecture that are repeated to identify potential dummy object;
 - creating a list objects, from the netlist of objects, that are used by a circuit design to be implemented in the target hardware architecture;
 - forming a list of unused objects in the target hardware architecture from the netlist of objects and the list of objects used by the circuit design;

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replacing any at least one object in the netlist of objects for the target hardware architecture that is also specified in the list of unused object and which is identified as a potential dummy object with an appropriate dummy object to form a modified netlist by removing functional hardware description language from the object; and

simulating the modified netlist by simulating each object of the modified netlist inclusive of each dummy object, wherein for each dummy object, a signal provided to the dummy object is fed through the dummy object unchanged.--

Claim 12 has been replaced with the following:

-- 12. The method of claim 11, wherein the method further comprises feeding through a signal unchanged when simulating the modified netlist inclusive of each dummy object.--

Allowable Subject Matter

4. Claims 1-12 and 16-20 are allowed over the prior art of record.

5. The following is a statement of reasons for the indication of allowable subject matter:

While Joly et al. discloses creating a netlist of objects specifying each object for the target hardware architecture, identifying objects specific to the target hardware architecture that are repeated to identify potential dummy objects, creating a list of objects, from the netlist of object, that are used by a circuit design to be implemented in the target hardware architecture, while Wirthlin et al. discloses forming a list of unused objects in the target hardware architecture that is a field programmable gate array from the netlist of objects, and while Bryant et al. discloses replacing at least one object in the netlist of objects for the target hardware architecture that is also specified in the list of unused objects with an appropriate dummy object to form a modified netlist, nor the prior art of record discloses a method of reducing a size of netlist, including:

(Claim 1) “replace at least one object in the netlist objects... which is identified as a potential dummy object ... to form a modified netlist by removing functional hardware description language from the object; and

simulate the modified netlist by simulating each object of the modified netlist inclusive of each dummy object, wherein for each dummy object, a signal provided to the dummy object is fed through the dummy object unchanged.”,

(Claim 11) “replacing at least one object in the netlist objects... which is identified as a potential dummy object ... to form a modified netlist by removing functional hardware description language from the object; and

simulating the modified netlist by simulating each object of the modified netlist inclusive of each dummy object, wherein for each dummy object, a signal provided to the dummy object is fed through the dummy object unchanged.”,

(Claim 16) “replace at least one object in the netlist objects... which is identified as a potential dummy object ... to form a modified netlist by removing functional hardware description language from the object; and

simulate the modified netlist by simulating each object of the modified netlist inclusive of each dummy object, wherein for each dummy object, a signal provided to the dummy object is fed through the dummy object unchanged.”, and

(Claim 18) “...replacing at least one object in the netlist objects... which is identified as a potential dummy object ... to form a modified netlist by removing functional hardware description language from the object; and

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...simulating the modified netlist by simulating each object of the modified netlist inclusive of each dummy object, wherein for each dummy object, a signal provided to the dummy object is fed through the dummy object unchanged.”,

in combination with remaining elements and features of the claimed invention.

It is for these reasons that the applicant's invention defines over the prior art of record.

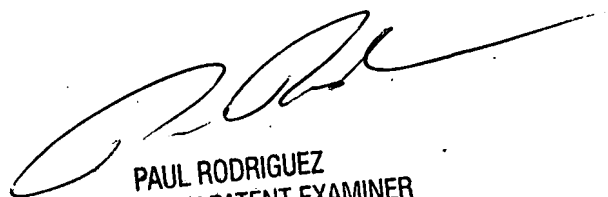
Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eunhee Kim whose telephone number is 571-272-2164. The examiner can normally be reached on 8:30am-5:00pm Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Rodriguez can be reached on 571-272-3753. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

EK



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